

Directions in Tagging

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Current Status of Tagging

- NOT Tagger - cut based
- NetTagger - neural net
- Elba merges NOT and NetTagger
- Similar performance:

Tagger	Q(%)	$\sin 2\beta$	Diff.
Elba tagger	26.2 ± 1.2	0.596 ± 0.138	
N.O.T.	25.4 ± 1.2	0.595 ± 0.137	-0.0006 ± 0.0139
NetTagger	27.0 ± 1.1	0.598 ± 0.134	0.0018 ± 0.0317

Elba enabled Tagging to move ahead

- Most events tagged in transparent way
- Kept contributing groups on board
- No real loss in performance

What are Immediate Needs?

- Reliability
- Verifiability
- Maintainability
- Flexibility

These need attention before seeking higher Q

What are Biggest Liabilities?

- Too dependent on individuals
- Too fragmented
- Fails to attract new talent

Development of Common Tagging Tool (Juerg)

- Not new idea. Cornelius exists...
 - No one maintaining it..
 - Unsuccessful attempt to interface Net-Tagger
- Implementation well under way

- Features

- Modularity

- * Separate evaluation of discriminating variables from tagging algorithms

- * Make basic building block a tagging algorithm

- Built-in QA, including histogramming

How Common Tagging Tool Puts Us on Right Track

- CTT enables us to consolidate all existing Tagging work
- CTT exploits all the experience gained with Cornelius, NOT, NetTagger
- CTT will make all tagging tools accessible to new users
 - Will help attract contributors
 - Will help $\sin 2\alpha$, mixing, et al.

- CTT will allow us to capture incremental improvements in tagging
- CTT will help us re-evaluate tagging options
 - Common inputs will make comparisons clearer
 - Uniform software standards will be automatic
 - Will reduce political content of decision
 - * *Choice will be between algorithms, not whole packages*

Plans

- Tagging workshop - mid-October
 - Establish schedule for revamping tagging for summer conferences
 - Establish schedule for NIM paper
 - Attract new participants

- CTT will enable us to write comprehensive NIM paper
 - Begin by full documentation of CTT
 - NIM paper needs to cover all tagging tools
 - Preferable to have single such paper